Claim Listing

The following claims replace all existing claims in the application. The amendments to the claims 13 and 15 are voluntarily made, not in response to any objection, rejection or for any other reason related to any rule or statute, but merely to add clarity to the claimed subject matter.

1-8 (canceled)

9. (Previously Presented) A process for using a programmable illumination pattern generator so as to provide active feedback in the optimization of an illumination pattern prepared by said pattern generator, said process comprising:

creating a predetermined illumination pattern;

configuring said programmable illumination pattern generator in accordance with said predetermined illumination pattern;

illuminating a field of view on a substrate using a light source and a projection system using the programmable illumination pattern generator;

acquiring an image of the field of view;

analyzing said image so as to extract a set of feature coordinates within the image; and

iterating said creating, configuring, illuminating, acquiring and analyzing steps n times, wherein n is an integer from zero to 10,000, using said feature coordinates determined in the (n-1)th analyzing step so as to create a derivative optimized illumination pattern.

10. (Previously Presented) The process of claim 9, wherein the predetermined illumination pattern is created within a graphical user environment.

11. (Previously Presented) The process of claim 9, wherein said configuration step is performed using a liquid crystal display panel.

12. (Previously Presented) The process of claim 9, wherein the programmable illumination pattern generator comprises an active mask which is configured by means of

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a video adapter interfaced with an active mask control circuit.

13. (Currently Amended) The process of claim 9, wherein the active feedback is used to programmably reconfigure an array of particles assembled on the substrate ~~in accordance with claim 15~~.

14. (Previously Presented) The process of claim 13, wherein said particles are being reconfigured by applying a segmentation operation, said operation producing at least two subarrays.

15. (Currently Amended) The process of claim ~~9~~ 14, wherein the active feedback is used to optimize the configuration of an assembled particle array by iterating the operation of array segmentation.

16-19 (canceled)

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